

REMARKS**Response to Claim Rejections Under 35 U.S.C. §102(b)**

The Office has rejected claims 1, 3-8, 14-17 and 26 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,774,650 to Chapman et al. If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more, the applicant is entitled to the grant of the patent. See *In re Oetiker*, 977 F. 2d 1443 (Fed. Cir. 1992). Under 35 U.S.C. § 102, anticipation requires that there is no difference between the claimed invention and reference disclosure, as viewed by a person of ordinary skill in the field of the invention. See *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565. Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. In deciding the issue of anticipation, the trier of fact must identify the elements of the claims, determine their meaning in light of the specification and prosecution history, and identify corresponding elements disclosed in the allegedly anticipating reference. See *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452.

Regarding Applicants' claim 1 (currently amended) and claim 26 (currently amended), claim 1 and claim 26 recite a method and system, respectively, for verifying the identities of new users of a computer system using similarity searching, as contrasted to the Chapman reference which discloses a method for controlling access to a networked computer system. These differences account for the Applicants' claim limitations that are not found in the Chapman reference. It should be noted that the meaning of the term "similarity searching" is based on the use of a similarity search engine disclosed in paragraph 0009 of Applicants' specification as U.S. Patent Application No. 09/401,101, filed on September 22, 1999, which is incorporated by

reference into Applicants' specification. U.S. Patent Application No. 09/401,101 issued as U.S. Patent No. 6,618,727 on September 9, 2003.

Similarity searching according to U.S. Patent No. 6,618,727 is a computer-implemented method for detecting and scoring similarities between documents in a source database and a search criterion such as new user profile data. It uses a hierarchy of parent and child categories to be searched, linking each child category with its parent category, which may be likened to a tree type structure with parent and child objects. Source database documents are converted into hierarchical database documents having parent and child objects with data values organized using the hierarchy of parent and child categories to be searched. For each child object, a child object score is calculated that is a quantitative measurement of the similarity between child objects in the hierarchical database documents and the search criteria. A parent object score are computed from its child object scores. Calculating a score comprises determining a number for the score that represents how similar and dissimilar the source value is to the search criteria such as the new user profile data. The calculated score is a quantitative measure of the similarity between the source data and search criteria, and may, for example, take on any value between the numbers zero and one.

The first element of Applicants' claim 1 and claim 26 recite the limitation, "receiving a plurality of records, each record containing profile data input by a new user". The profile data in this limitation is not constrained to be user names and passwords for gaining access to a computer system, as cited by the Office in column 1, lines 17-20 of the Chapman reference. Applicants' profile is input by a new user for determining that the new user is the person identified in the profile data, and may contain any information provided by a user, such as home address, social security number, driver's license number, etc. Applicants' profile data is used to

determine if the new user has been involved in fraudulent activities in the past, whereas the profile data described in the Chapman reference is merely conventional user name and password information used for gaining access to a computer system. The profile data listed in the Chapman reference must be entered by all users of a computer system every time a user wishes to gain access to the computer system. The profile data of Applicants' disclosure is only required by new users to determine if they qualify to be allowed to access a computer system, since once a new user qualifies for access to the computer system, the new user no longer needs to re-qualify by inputting profile data. Therefore, when the meaning of this limitation of Applicants' claim 1 is interpreted in light of the specification, this limitation is not found in the Chapman reference cited by the Office.

The second and third elements of Applicants' claim 1 and the third and fourth elements of Applicants' claim 26 recite the limitations, "similarity searching the profile data of each record against suspended-users profile data" and "receiving a similarity search result set", respectively. As described above, U.S. Patent No. 6,618,727, which is incorporated herein by reference, discloses a similarity search engine that may be used for similarity searching by comparing two documents to determine indicia of similarity that provides a quantitative measure of how alike the two documents are, such as a new user profile data and suspended-users profile data. This similarity search engine is used to similarity search the profile data against suspended-users profile data and provide a similarity search result set that includes indicia of similarity. The suspended-users profile data contains profile data of users that have been removed or suspended from the system in the past (see Applicant's specification paragraph 0016). If a new user profile data has a similarity match to a suspended-user's profile data, an investigation is conducted to

determine if the new user is trying to gain access to the system by creating a new fictitious account (see Applicants' specification paragraph 0020).

The Office cites column 5, line 30-41 of the Chapman reference as disclosing Applicants' second limitation of claim 1 and third limitation of claim 26. This passage describes conventional methods for validating a user account by exact matching of usernames with those stored in a database file, authenticating the user by exact comparison of the encrypted true password with that supplied by a user attempting to logon, and establishing exact user credentials stored in a database. This cited passage requires exact matching of usernames and passwords, which may be performed by conventional database management systems. There is no disclosure of similarity searching in this cited passage, and furthermore, a similarity search would not be applicable or desirable to this application, since persons other than an authenticated user may gain access to the computer system by providing similar usernames and passwords. There is also no disclosure in the Chapman reference of similarity searching profile data against suspended-users profile data. There is no disclosure of either similarity searching or of suspended-users profile data in the Chapman reference.

The Office cites column 5 lines 42-45 of Chapman as disclosing Applicants' third limitation of claim 1 and fourth limitation of claim 26. This passage describes checking account details to determine whether or not to grant a user access to the system. There is not disclosure in the Chapman reference of receiving a similarity search result set. Furthermore, in order to accomplish this limitation, a similarity search engine like that disclosed in U.S. Patent No. 6,618,727 would be required.

The fourth and fifth element of Applicants' claim 1 and the fifth and sixth element of claim 26 recite the limitations "determining, for each record, whether a positive similarity match

or a negative similarity match exists between the profile data of the record and the suspended-users profile data based on the similarity search result set” and “allowing a new user to access the computer system, where a negative similarity match is determined between the record of the new user and the suspended-users profile data”, respectively. There is no disclosure in the Chapman reference of determining a positive or negative similarity match between profile data and suspended-users profile data based on the similarity search result set. There is also no disclosure in the Chapman reference of allowing a new user access to the system if a negative similarity match is determined between the new user profile data and the suspended-user profile data.

The sixth element of Applicants’ claim 1 and the seventh element of claim 26 recite the limitation “forwarding the record of a new user to a review process, where a positive similarity match is determined between the record of the new user and the suspended-users profile data, the review process comprising confirming whether the positive similarity match exists between the profile data of the record and the suspended-users profile data, allowing the new user to access the computer system, where the positive similarity match is not confirmed, and denying the new user access to the computer system, where the positive similarity match is confirmed.” The Office cites column 6, line 66 - column 7, line 6 of Chapman as disclosing this limitation. This passage describes checking whether a user logging on is temporarily unauthorized to logon, displaying a message and logging him off. There is no disclosure in the Chapman reference of a review process of a positive similarity match confirmation, based on the similarity search result set, confirming a similarity match between the new user profile data and the suspended-users profile data, and allowing or denying access based on the similarity match.

Since every element of Applicants claimed invention, arranged as in the independent claims 1 and 26, are not found implicitly, explicitly or inherently in the single reference of

Chapman, the Office has failed to substantiate a *prima facie* case for anticipation and Chapman et al does not anticipate Applicants' independent claims 1 and 26. Therefore the rejections of claims 1 and 26 should be withdrawn. Furthermore, claims 2-11 are either directly or indirectly dependent upon independent claim 1. These dependent claims incorporate all the limitations of the independent claim upon which they depend while providing further unique and non-obvious recitations. Since the rejection of claim 1 is not supported by the Chapman disclosure, the rejections of these dependent claims 2-11 as anticipated are also not supported by the Chapman reference and should be withdrawn. Applicants request withdrawal of the rejection of claims 1-11 and 26, reconsideration and reexamination of the application.

#### **Response to Claim Rejections Under 35 U.S.C. 103(a)**

The Office has also rejected claims 2, 9-11, 13, and 18-24 under 35 U.S.C. § 103(a) as being unpatentable over Chapman et al. (U.S. Patent No. 5,774,650) in view of U.S. Patent No. 6,026,398 to Brown et al. The Office bears the initial burden of establishing a *prima facie* case of obviousness. *See In re Piasecki*, 223 USPQ785, 788 (Fed. Cir. 1984). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991), MPEP § 2142 and § 2143.

Regarding Applicants' claims 2 and 9-11, claims 2 and 9-11 are either directly or indirectly dependent upon independent claim 1. These dependent claims incorporate all the limitations of the independent claim upon which they depend while providing further unique and non-obvious recitations. Since it has been shown above that the rejection of claim 1 is not supported by the Chapman disclosure and claim 1 is not anticipated, the rejections of these dependent claims 2 and 9-11 as obvious are also not supported by the Chapman reference and should be withdrawn.

Considering further Applicants' claim 2 (currently amended), claim 2 recites the limitation, "wherein the step of determining a positive or negative similarity match further comprises assigning a match score to each similarity search result set and comparing the match score to a pre-determined match tolerance level." As described above, U.S. Patent No. 6,618,727, which is incorporated herein by reference, discloses a similarity search engine that may be used for similarity searching by comparing two documents to determine indicia of similarity that provides a quantitative measure of how alike the two documents are, such as a new user profile data and suspended-users profile data. This similarity search engine is used to similarity search the profile data against suspended-users profile data and provide a similarity search result set that includes indicia of similarity. The Office cites column 3, line 66 - column 4, line 7 of Brown as disclosing having a match score for similarity search result. The cited passage discloses using a Soundex function for determining matching index entries, computing record weights and determining match conditions for indicating how close input data is to certain match records. There is no disclosure in this passage of assigning a match score to each similarity search result set, as disclosed in U.S. Patent No. 6,618,727. The Office cites column 14, lines 49-51 of Brown as disclosing comparing a match score against a predetermined tolerance level. The cited passage

discloses multiple match conditions when more than one match record matches input search data above a threshold amount. There is no disclosure of comparing the match score assigned to each similarity search result set to a pre-determined match tolerance level. The cited passage of column 6, line 66 - column 7, line 6 of Brown merely describes the hardware functions shown in Figure 1 of the Brown reference.

Considering Applicants' claim 9 (original), claim 9 recites the limitation, "wherein the step of similarity searching further comprises similarity searching the new-user profile data against the suspended-users profile database, via a batch similarity search engine." The search engine disclosed in incorporated U.S. Patent No. 6,618,727 performs the similarity search function. The Office cites column 8, lines 17-25 and column 8, lines 48-51 of Brown as disclosing Applicants claim 9. Note that the cited passages rely on database records that are statistically tested using a statistical analysis technique. There is no disclosure of Applicants' similarity search engine, which does not rely on statistical techniques to determine a similarity search result set. There is no disclosure of similarity searching, according to Applicants' disclosure, in either the Chapman reference or the Brown reference.

Considering Applicants' claim 10 (currently amended), claim 10 recites the limitation, "wherein the positive response process further comprises relaying the new-user record to a user-review database, before the step of confirming at least one positive similarity match." The Office cites column 14, lines 8-21 of Brown as disclosing records for review. The cited passage does not disclose relaying the new-user record to a user-review database before the step of confirming at least one similarity match. The Brown reference also does not disclose similarity search functions according to incorporated U.S. Patent No. 6,618,727.



Considering Applicants' claim 11 (currently amended), claim 11 recites the limitation, "further comprising the step of displaying the user-review database via a web-based interface, after the step of relaying the new-user record to a user-review database and before the step of confirming at least one positive similarity match." The Office cites column 15, line 62 - column 16, line 3 of the Brown reference as disclosing this limitation. The cited passage does not disclose displaying the user-review database via a web-based interface, after the step of relaying the new-user record to a user-review database before the step of confirming at least one similarity match. The Brown reference also does not disclose similarity search functions according to incorporated U.S. Patent No. 6,618,727.

Regarding Applicants' independent claim 13 (currently amended), claim 13 recites a method for verifying the identities of new users of a computer system using similarity searching, as contrasted to the Chapman reference which discloses a method for controlling access to a networked computer system and the Brown reference which discloses a method for searching and matching databases. These differences account for the Applicants' claim limitations that are not found in the Chapman or Brown references. It should be noted that the meaning of the term "similarity searching" is based on the use of a similarity search engine disclosed in paragraph 0009 of Applicants' specification as U.S. Patent Application No. 09/401,101, which is incorporated by reference into Applicants' specification. U.S. Patent Application No. 09/401,101 has issued as U.S. Patent No. 6,618,727. Similarity searching as disclosed in this specification and according to this incorporated patent is briefly described previously.

The first element of Applicants' claim 13 recites the limitation, "receiving a plurality of records into a production new-user database, each record comprising profile data input by a new user". The Office has cited column 4, lines 16-20 of Brown as disclosing this limitation. The

cited passage discloses that if a second function fails to find a hit, a third function, which may be a Q-Gram function, may be used. There is no disclosure of Applicants' first limitation of claim 13 in the Brown reference cited by the Office.

The second and third elements of Applicants' claim 13 recite the limitations, "updating a new-users profile database, with profile data from each record received into the production new-users database" and "updating a suspended-users profile database, containing suspended-user profile data, with additional suspended-user profile data stored in a production-suspended-users database", respectively. The Office has cited column 1, lines 57-61 of Chapman as disclosing these limitations. The cited passage discloses the need for reflecting an added new user or permanent deleted existing user in backed-up and active versions of the file system. Applicants' new-users profile database, production new-users database, and suspended-users profile database do not function as backed-up versions, but are integral functions of Applicants claimed invention. The passages cited by the Office do not disclose the second and third limitations of Applicants' claim 13.

The fourth and fifth elements of Applicants' claim 13 recite the limitations, "relaying the new-user profile data from the new-user profile database to a similarity search engine" and "similarity searching the new-user profile data against the suspended-users profile database, via the similarity search engine", respectively. The Office has cited column 8, lines 17-25 of Brown as disclosing the fourth limitation of Applicants' claim 13. The passage cited by the Office discloses database records that are statistically tested using a statistical analysis technique. There is no disclosure of Applicants' similarity search engine, which does not rely on statistical techniques to determine a similarity search result set. The Office has also cited column 8, lines 48-51 of Brown as disclosing the fifth limitation of Applicants' claim 13. The passage cited by

the Office discloses a match engine that uses a statistical analysis technique to determine closely related terms. This disclosure is patentably distinct from Applicants disclosed similarity search engine, which does not rely on statistical analysis techniques. The passages cited by the Office do not disclose the fourth and fifth limitations of Applicants' claim 13.

The sixth element of Applicants' claim 13 recites the limitation, "receiving at least one similarity search result set". The Office has cited column 5, line 42-45 of Chapman as disclosing the sixth limitation of Applicants' claim 13. The passage cited by the Office discloses checking account details to determine whether a user may be granted access to the system. There is no disclosure in this cited passage of receiving a similarity search result set from a similarity search engine as disclosed in the sixth element of Applicants' claim 13.

The seventh and eighth elements of Applicants' claim 13 recite the limitations, "determining, for each record, whether a positive similarity match or a negative similarity match exists between the profile data of the record and the suspended-users profile data based on the similarity search result set" and "allowing a new user to access the computer system, where a negative similarity match is determined between the record of the new user and the suspended-users profile data", respectively. The Office cites the Chapman reference as disclosing comparing profile data against an unauthorized list to determine access to the computer system. This citation does not disclose the seventh and eighth elements of Applicants' claim 13. There is no disclosure in the Chapman reference of determining a positive or negative similarity match between profile data and suspended-users profile data based on the similarity search result set. There is also no disclosure in the Chapman reference of allowing a new user access to the system if a negative similarity match is determined between the new user profile data and the suspended-user profile data.

The ninth element of Applicants' claim 13 recites the limitation, "forwarding the record of a new user to a review process, where a positive similarity match is determined between the record of the new user and the suspended-users profile data, the review process comprising confirming whether the positive similarity match exists between the profile data of the record and the suspended-users profile data, allowing the new user to access the computer system, where the positive similarity match is not confirmed, and denying the new user access to the computer system, and forwarding the profile data from the new-user record to the production suspended-users database, where the positive similarity match is confirmed." The Office has cited column 14, lines 8-14 of Brown as disclosing submitting records for review where tests are conducted to confirm similarity. The cited passage of column 14, lines 8-14 actually discloses a description of Brown's Figure 11, where a second function is applied to ten highest record weights of match records to determine whether a match is sufficiently distinct in its weight to be considered a match to input data. The cited passage by the Office does not disclose submitting records for review where tests are conducted to confirm similarity, nor does it disclose forwarding the record of a new user to a review process, where a positive similarity match is determined between the record of the new user and the suspended-users profile data, as found in the ninth element of Applicants' claim 13. The Office also cites column 14, lines 17-21 of Brown as disclosing a review process where tests are conducted to confirm similarity in order to determine the likelihood of a match between input data and stored data. The cited passage of column 14, lines 17-21 disclose that each record match test outputs a test weight value that may be used to determine the statistical likelihood of a match. Neither the Chapman reference nor the passage cited by the Office disclose confirming whether the positive similarity match exists between the profile data of the record and the suspended-users profile data, allowing the new user to access

the computer system, where the positive similarity match is not confirmed, and denying the new user access to the computer system, and forwarding the profile data from the new-user record to the production suspended-users database, where the positive similarity match is confirmed, as recited in the ninth element of Applicants' claim 13.

Since the references of Chapman and Brown cited by the Office do not teach or suggest every element of Applicants claimed invention, arranged as in the independent claim 13, the Office has failed to substantiate a *prima facie* case for obviousness under 35 U.S.C. § 103(a). Therefore the rejection of claim 13 should be withdrawn. Furthermore, claims 14-24 are either directly or indirectly dependent upon independent claim 13. These dependent claims incorporate all the limitations of the independent claim upon which they depend while providing further unique and non-obvious recitations. Since the rejections of claim 13 is not supported by the Chapman and Brown disclosures, the rejections of these dependent claims 14-24 is also not supported by the Chapman or Brown reference and should be withdrawn. Applicants request withdrawal of the rejection of claims 13-24, reconsideration and reexamination of the application.

### **Summary**

The responses detailed above rebut the assertions by the Office of anticipation and obviousness of Applicants' invention, since all the elements of Applicants' claimed invention are not found in the cited references of Chapman et al and Brown et al. The responses substantiate the novelty and nonobviousness of claims 1-11, 13-24 and 26-28 of Applicant's specification over the cited references. Since the rejections are unsupported for failure to find all Applicants' claim limitations in the cited references, the rejections should be withdrawn.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Douglas D. Russell, Applicants' Attorney at 512-338-4601 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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